

ABSTRACT

Briefly, the present invention provides a dynamic channel re-assignment capability between mobile units, base stations and sectors within base station coverage areas. The wireless devices used in the present invention may include impulse radio communication devices such as, for example ultra-wideband radio (also known as digital pulse wireless) communication devices. Ultra-wideband bandwidth and channel allocation can be effectively managed, even though link quality generally deteriorates near the outer boundary of the base station. By maintaining dual communications with an adjoining base station, the present invention reduces the bit error rate and maintains signal strength (e.g., RF signal strength). This procedure is termed a “soft-handoff”.